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The Human Element in the Machine Process

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PERHAPS the most underlying obstacle in the way of maximum production is psychological—the reaction of the worker to his job, and by that I do not mean the worker in the narrow sense of the word or the job in the narrow sense of the word, but the reaction of the human element to modern work, and that takes in all classes of labor and all kinds of work. Before we can proceed with this subject it is very important to get a perspective of the situation.

Conservative estimates put the length of mankind on earth at about 500,000 years. Probably, as far as we know, it took mankind about 350,000 years to learn to sharpen a piece of flint on one side and produce the first knife. It was not until 75,000 years ago that man captured fire for his own, and it was not until ten to twenty thousand years ago that Neolithic man entered Europe and we had a manner of life on earth that in any way approximates life as we know it today—the rudiments of agriculture, the first domestication of animals, the first settled habitations. Psychologists and students of human nature tell us that we are Neolithic men—in other words, that human nature, the psychology of man, has practically not changed at all in these ten to twenty thousand years.

INDUSTRIAL SYSTEMS

To make that a little more vivid, one should plot it. If you take a line about thirty-three inches long as 500,000 years, the last ten to twenty thousand years is a little distance of about one inch; in other words, in a

period thirty-three inches long compared to a period one inch long, human environment changed practically not at all. If we take that last ten to twenty thousand years what have we in that length of time? We have, first, as far as the labor is concerned, the domestic system, the production within the group for the group. Then we have the early wage work where the worker received the raw material from the consumer, finished the article and sold it to the consumer, receiving a wage. Then the handicraft system, where the worker furnished the raw material and sold the completed article directly to the consumer. Next we pass into the commission system, when the middleman makes his appearance but where the worker still works in his own home, receiving the raw material from the middleman and a wage for the finished article from the middleman. Over night we come into the factory system, machine production, and to show the small length of time in which we have been under the machine production it is necessary to take a line the same length as your 500,000 years, about thirty-three inches, and call it ten to twenty thousand years, and then your factory system is again a short space of about three inches at one end.

If it is true, as Veblen says, that the state of the industrial arts determines the life or the culture of a people, then we can see over the great length of time that man has been in the world; his life and his culture have changed practically not at all. In the years from 1760 to 1800 the life of the rank

and file changed more than in the previous 500,000 years put together. Up to that time man puttered away at his own job pretty much in his own way and saw his own job through. All along the connection of the producer to the consumer was very direct. What situation is ushered in over night? Away at one end production begins and away at the other end consumption begins, and lost in between in the infinite division of labor that the machine process introduced is the worker, with the clank and roar of machinery in his ears and a pay envelope at a window at the end of the week, the discipline of long hours, of low wages and of a huge impersonal system over him. Much of this is true today in the industrial situation. All of it is so recent that it is a very vital background of the labor movement today. There are adults in the labor movement who have not gone through the unfortunate process which the industrial revolution introduced. Few negroes of today have been through slavery, yet slavery is very fresh in the minds of our black population. Just so the highly unfortunate experience of labor during the earlier years of the industrial revolution is fresh in the memory of labor in 1920. The unrest of today, the industrial unrest, is caused not by the high cost of living, nor is it caused by war. It is merely the accumulation of the mistakes of 150 years of domination of the human element by the machine. The history of the industrial revolution is the history of the human element trying to free itself from that domination.

STATE OF INDUSTRIAL ARTS

We must bear in mind another phase. The state of the industrial arts determines the life of a people. Since 1760 that life has changed faster than in the 500,000 years before. Inventions can do that. Arkwright,

Crompton and Watt were able to alter the life of the rank and file over night. But no invention has yet been found which can alter public opinion, which can change the public conscience, at anything like that quick rate. The state of the industrial arts got an enormous head start, in the first place. If it had stopped right there, say—about 1800, it might be that public opinion by now would have caught up with the situation. As it is the speed of life today, the rate of change proceeds in a continually accelerated degree. With infinite effort and infinite pains and much education, perhaps, public opinion can be brought to face a certain situation in a certain way. But by the time public opinion has reached that point, that situation is no longer there—it has moved away and on, and then all the painstaking effort and education must begin all over again; public opinion never does catch up with our industrial problems. Is it any wonder then, that at times the radical—and by radical I mean the individual who recognizes that change, that dynamics is the order of the universe today—grows a little out of patience with the conservative? By conservative I mean that type of individual who insists upon considering the environment today as static.

Machine technique has forced industrial life at such a pace that there seems no possibility of public opinion ever keeping up with it under our present educational systems. One of the agencies making for the disturbance and the unrest today is the wide discrepancy between the effect of industrial life on the individual and the fact that the public conscience, public opinion, lags so far behind in its methods of adjustment in human relationships. Of course, your conservative would argue that if the change could be made with sufficient speed to

suit the radical, perhaps more harm would be done than under the present situation. There could be no answer given to that, because public opinion never has changed with the speed to satisfy radicals. I am not referring to such a thing as war hysteria which seems to be able to change public opinion quickly, but that sort of an opinion relapses quickly—I mean the actual education of the public conscience. When you consider the size of the public today, the size of the people coming within the machine process, no matter at what extreme—employer, management or employee—when you consider the size of that body, you can realize the inability of the opinion of that body ever catching up with the speed of the industrial system as made possible by the machine technique of today.

What else are we paying for besides the mistake of the industrial revolution in neglecting the human element? We are all paying, no matter what our position in the system, the price of the speed and tension that inventions, that the machine process forces on the life of the great majority. We cannot cast aside the machine process. We cannot do away with big business. Production has to be carried on on a large scale to furnish the wants of people as they exist today. It simply means we must not intensify the dangers of the situation by any more mistakes than are possible along the way.

HUMAN ELEMENT IN INDUSTRY

What of the human element itself? Under the machine process for the last 150 years the human element has had practically no chance for self-expression. The creative effort, the instinct of leadership, the instinct of following a fit leader, the instinct of possession, the homing instinct, the parental instinct, the sex instinct, almost every

instinct you could mention has had either no expression, from the point of view of labor, under the industrial system, or too slight expression to have a normal psychological life result. From that point of view again the unrest of today represents a culmination of 150 years of repressed instinct expression, of a lack of opportunity for the great part of the population to lead a wholesome, normal life.

A man once told a little story of lending a dollar to an I. W. W. When a year later the I. W. W. paid the dollar back, the man asked the young fellow, "What would you like most in life if you could have what you wanted?"

The fellow replied, "I would like to be able to keep clean and I would like to have a girl."

Now, neither of those desires are very reprehensible. The perpetuity of the race depends upon at least one of them, and it is just because such fundamental impulses and instincts as those two have not found expression over 150 years that we have the unrest of today.

What has been the result of the fact that industry itself has not given the human element enough of a chance to express itself for normality to be the result? It means that labor has been forced to throw its energies into the class movement, the labor movement. To the employer the labor movement has been actually inimical to industry. At times it has flourished almost entirely at the expense of industry. It is no one's fault that that has been the development of the labor movement. It is the growth forced on the labor movement by the situation itself. Labor had to find some outlet for these absolutely essential instinct expressions. It could not find them in industry. Most of the laborer's life was spent in industry. He had no chance, no time for self-expression in some

phase of life entirely apart from industry. The movement of organized labor, in whatever form or whatever faction, offered labor a chance for these instinct expressions that were denied in industry, in politics, in education, even, indeed, in religion. All the best things that can be said about the labor movement center around the spiritual side of it. It was an outlet, and if we had not had this outlet, the revolt and unrest of today would be far more bitter and far more wide-spread than it is. But do we wish to continue with this emphasis on a class movement, or do we wish to allow labor to play such a part in industry that this instinct expression will have a chance to function in industry. This must take place or we will always have industrial unrest and when it takes place the entire community will be benefited instead of it being merely a class movement. In other words, labor must be allowed to feel that industry is his to the extent that in industry he can find greater self-expression.

There is in this volume much discussion as to the various schemes for allowing labor more responsibility in the job. I am not going into the details of those schemes. It is not such a new thing as some employers would have you believe; it is already being tried in many industries. The main thing is to sell the idea to the public, to sell the idea to the employers, so that it will become familiar and what manifestations labor makes toward acquiring greater responsibility in industry will not be fought as persistently as almost every demand labor has made in the last one hundred and fifty years has been fought. When it comes right down to a particular plan through which labor is going to feel an added responsibility in the job, any plan as such does not count for much one way or the other. The important thing is, what is in the

employer's heart? When he puts a plan in does he put it in as a sop to labor, as a "welfare," scheme, or does he put it in with an underlying sense of the justice of the situation and a realization of the fact that the labor movement has come to the point today where, through better wages and through better conditions, it has reached that degree of self-regard that demands a still further development of its initiative and of its control.

HANDICAPS IN INDUSTRY

If you should give labor its complete share in industry—and labor and the students of this problem tell you quite frankly that labor by and large is not ready today for equal responsibility, that it will take, perhaps, several generations before that can come about—the thing is that it must be given the chance whenever the chance presents itself. But suppose that labor were in possession of full responsibility, complete copartnership with management, with the employer, would we have the millennium, would we have an industrial Utopia? No! At that point comes in the large part that in the future must be played by the field of mental hygiene.

Today there is just cause for much of the revolt, for much of the uneasiness, for much of the unrest in the industrial field. We would not be human beings fit working for if there were not revolt and unrest over many of the conditions of today. However, your mental hygienist, your psychopathologist, knows that there is much unrest that is purely a psychopathical problem, and with conditions almost perfect there would still be individuals who were not satisfied, there would still be individuals who could not "fit in," there would still be individuals with grouches, there would still be individuals who could not get

along with others. You would never think of employing a hunch-back in the coal mines or steel industry or as a stevedore. Just so must the public come to realize that there are individuals with as great a mental handicap toward their job as the physical handicap of the hunch-back toward his job, and that mental handicap must be taken care of as much as the physical handicap must be taken care of before we can have the highest efficiency in industry.

The mental hygiene movement is young, and it is, on the whole, a personal relationship that has to be established between the mental healer and the patient, and it is going to be a long process and a slow process before that line of treatment can be put over in industry. At first the struggle is more in the larger field. The struggle is to get away with the large handicap of the machine domination of the individual. By the time that is removed, then your mental hygiene movement is ready to step in and deal with the individual case, the individual discontent, the individual who cannot get along with his fellow beings, not because they are treating him in such a way that no normal human could get along under the circumstances, but because there is a kink some place in his mind that must be smoothed out by technical treatment.

DIVORCE OF THOUGHT AND WORK

The last psychological obstacle, and a very great one, that we all pay the price for is the fact that life today puts too great a strain and tension on all of us for thought. The speed of modern life is such that people cannot stop and do not stop to take thought of the industrial situation, as thought must be taken if we are going to find any solution for unrest. The men in industry themselves, no matter whether

they be laborers or employers, are all under too much tension, are all working under too much speed to stop and put their minds on this situation as must be done sooner or later, and what has been the result? On the whole, the result has been that the constructive thinking done in this field, or attempts at constructive thinking, have been done by your professional thinker, and by that I mean your university professor. Here again, he is working under such tension today that he has not the chance to have the contact with the industrial problem, the practical contact that is needed to continually shape his theories to a useful end.

We all pay the price of that divorce of thought and work, and as I see it that is one of the great obstacles to a speedier industrial reconstruction. Your employer and your worker are forced to snap, quick judgments because they cannot take stock of the situation, and your theorist off in his little corner is worked to death under the present university system, so that he, in turn, must merely theorize and cannot get out and have practical contact that is so needed.

NECESSITY FOR ADULT EDUCATION

We are apt to talk a great deal about the education of the working class. The working class needs education. It knows it needs education, but there is not a class in the country which does not need education. There is not a human being in the United States today that would not be a little better off for knowing a little more.

As I see it, one of the big constructive steps to take today is the linking of adult education and industry. There is a school in New York that is trying to do that very thing—the New School for Social Research. When such a school is established in every city of the country, a long, forward step will

have been taken—a school with late afternoon classes, with evening classes, with the sort of work that will draw people from the manufacturing industries, employers, professional men, newspaper writers, no matter what their walk in life is, or if they are just pure theorists, all can go to school and link up their work during the day with the intellectual side of life. Moreover, by having that type of student the professor is constantly in contact with the practical workings of the situation and he is in a better position to give a sound theoretical contribution in return. That is a system of education

which should be established all over the country, not necessarily a class movement, not necessarily labor class education, but the sort of education that has an eye, a vision for the future, which creates small, permanent industrial councils in every city of the United States, where around a research table sit employers and workers and professional men threshing out together these problems of industry that no one set can solve alone—that must be solved with the combined brains of every walk of life in the nation, if we are going to search for a solution that is to be widespread and lasting.